



Midpeninsula Regional Open Space District

GEOGRAPHIC INFORMATION SYSTEM (GIS) PROGRAM ADMINISTRATOR

DEFINITION

Under general direction, plans, organizes, oversees, coordinates, and reviews the work of staff performing complex professional and technical support related to geographical information systems (GIS) software applications and databases; administers short and long-range information technology services planning activities; manages the effective use of assigned resources to improve organizational productivity and customer service; provides complex and responsible support to the Information Technology Services Manager in areas of expertise; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from the Information Systems and Technology Manager. Exercises general supervision over assigned staff.

CLASS CHARACTERISTICS

This is a supervisory classification responsible for assigned information technology services programs and activities, including development, design, operation, analysis, maintenance, and modification of GIS applications and databases. The incumbent is expected to possess the ability to adapt specific program procedures and activities to meet the needs of the District, other agencies, and technological advances. Successful performance of the work requires skill in proactively evaluating program goals and objectives to define and integrate the requirements of various internal and external clients. The work requires the frequent use of tact and judgment, knowledge of District-wide operations, and the ability to conduct independent projects and programs.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Plans, manages, and oversees the daily functions, operations, and activities of the Geographic Information Systems function, including the design, administration, and maintenance of District-wide GIS applications, database infrastructure, and web based and mobile applications; establishes support processes to ensure availability of application and database services.
- Participates in the development and implementation of goals, objectives, policies, and priorities for the assigned function; recommends within departmental policy, appropriate service and staffing levels; recommends and administers policies and procedures.
- Participates in the development, administration, and oversight of assigned budget.
- Develops and standardizes procedures and methods to improve and continuously monitor the efficiency and effectiveness of assigned division, service delivery methods, and procedures; assesses and monitors workload, administrative, and support systems and internal reporting relationships; analyzes performance metrics; recommends within policy, appropriate service and staffing levels and identifies opportunities for improvement and makes recommendations to the IST Manager.
- Participates in the selection of, trains, motivates, and evaluates assigned personnel; works with employees to correct deficiencies; recommends discipline to the IST Manager.

- Consults with other District departments regarding GIS needs and requirements, including identifying, designing, and developing GIS applications, strategies, and procedures for integrating the GIS program with existing District databases.
- Develops and maintains the District's Global Positioning System (GPS) Equipment, including developing custom applications to streamline and standardize GPS field collection and train staff of the proper use of related equipment.
- Directs District research activities to identify, acquire, and integrate data from other agencies and organizations into the District's data library; maintains and updates the District's information catalogue; creates and maintains government-compliant metadata; and develops procedures to share appropriate data.
- Contributes to the overall quality of the department's service by developing, reviewing and implementing policies and procedures to meet legal requirements and District needs.
- Oversees the development of consultant requests for proposals and qualifications for professional services; evaluates proposals and recommends project award; develops, negotiates, and reviews contract terms and amendments; ensures contractor compliance with District and department standards and specifications and time and budget estimates; reviews design documents to ensure technical integrity; reviews and updates deliverables; analyzes and resolves complex problems that may arise.
- Provides staff assistance to the IST Manager; conducts a variety of organizational and operational studies and special projects; prepares and presents staff reports and other necessary correspondence related to assigned activities and services; presents reports to various commissions, committees, and boards.
- Prepares a variety of written correspondence, reports, procedures, and other materials.
- Maintains accurate records and files related to the GIS function.
- Monitors changes in GIS technology and applications, recommends improvements and upgrades and implements changes after approval.
- Represents the District in inter-agency coordination activities related to GIS.
- Attends meetings, conferences, workshops, and training sessions and reviews publications and audio-visual materials to become and remain current on principles, practices, and new developments pertinent to GIS and the District.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Administrative principles and practices, including goal setting, program development, implementation, and evaluation, and budget and contract development and administration.
- Modern procedures, principles, and commands related to GIS database design, analysis, and programming.
- Advanced data management theory, principles, and practices and their application to GIS services and programs.
- Principles and practices of employee supervision, including work planning, assignment, review and evaluation, and the training of staff in work procedures.
- Project management principles including conception and initiation, definition and planning, launch and execution, monitoring and controlling, and close-out.
- Principles and practices for developing and coordinating a broad-based GIS program with applications for District departments, public agencies, private clients, and the general public.
- Basic computer programming to generate tools or scripts to automate repetitive tasks.
- Database design and integration for use with GIS
- Theories and techniques of GIS applications and web mapping technology.
- Familiarity with natural resource management issues and the principles and practices of open space and/or park planning.

- Methods and techniques used in spatial analysis and ecological modeling.
- Technology, hardware, software, and current applications related to GIS systems, including database management, mapping and report generation, and desktop publishing systems.
- Principles and practices of identifying technology needs and issues, researching and evaluating technology, applications and the most effective courses of action and implementing solutions.
- Applicable Federal, State, and local laws, codes and regulations.
- Modern office practices, methods, and computer equipment and applications related to the work.
- Record keeping principles and procedures.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Recommend and implement goals, objectives, and practices for providing effective and efficient services.
- Plan, organize, assign, review, and evaluate the work of staff; train staff in work procedures.
- Evaluate and develop improvements in operations, procedures, policies, or methods.
- Research, analyze, and evaluate new service delivery methods, procedures, and techniques.
- Coordinate a broad-based GIS program that includes effective database development, management and accessibility.
- Write Python geo-processing scripts
- Develop and deploy services for ArcGIS Server or spatially enabled service oriented architecture (SOA) or API.
- Database design and integration as it relates to spatial database development and integration with enterprise business systems.
- Assess user needs and recommend appropriate hardware, software, and systems to meet these needs.
- Perform complex modeling, mapping, database maintenance, and other GIS professional-level tasks.
- Develop documentation and informational materials and train users in GIS applications.
- Interpret, apply and explain technical materials to non-technical users.
- Interpret, apply and explain complex Federal, State, and local laws, codes, regulations, departmental policies and procedures.
- Understand the organization and operation of District departments and of outside agencies as necessary to assume assigned responsibilities.
- Prepare clear and effective reports, correspondence, policies, procedures, and other written material.
- Make accurate arithmetic, financial, and statistical computations.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment including computer equipment and specialized software applications programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to graduation from an accredited four-year college or university with major coursework in geography, community and regional planning, natural resources management, geographic information

systems, computer science, or a related field, seven (7) years experience with Geographic Information Systems with three (3) years at a supervisory or lead level in the management and administration of a Geographic Information System or Information Management System preferably in the area of land protection, open space planning, or natural resources management.

Licenses and Certifications:

- Possession of a valid California Driver's License.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to operate a motor vehicle, and to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office but frequently stands in and walks between work areas and development sites. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push and pull drawers open and closed to retrieve and file information.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances.

EFFECTIVE: December 2010
REVISED: August 2016
FLSA: Exempt